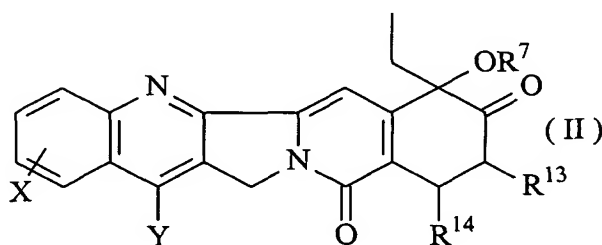
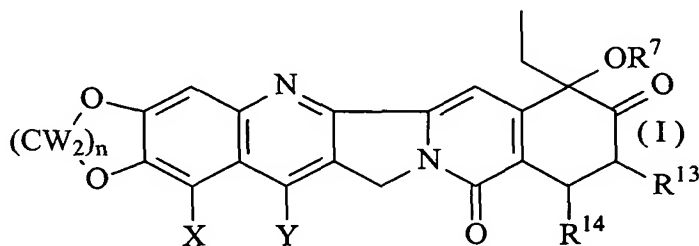


WHAT IS CLAIMED AS NEW AND DESIRED TO BE SECURED BY LETTERS
PATENT OF THE UNITED STATES IS:

1. A camptothecin analog having the structure:



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where

X and Y are each independently NO₂, NH₂, H, F, Cl, Br, I, COOH, OH, O-C₁₋₆ alkyl, SH, S-C₁₋₆ alkyl, CN, NH-C₁₋₆ alkyl, N(C₁₋₆ alkyl)₂, CHO, C₁₋₈ alkyl, N₃,

10 -Z-(CH₂)_a-N-((CH₂)_bOH)₂, wherein Z is selected from the group consisting of O, NH and S, and a and b are each independently an integer of 2 or 3,

-Z-(CH₂)_a-N-(C₁₋₆ alkyl)₂ wherein Z is selected from the group consisting of O, NH and S, and a is an integer of 2 or 3,

15 -CH₂-L, where L is halogen (F, Cl, Br, I), ⁺N₂, ⁺(OR¹)₂, ⁺S(R¹)₂, ⁺N(R¹)₃, OC(O)R¹, OSO₂R¹, OSO₂CF₃, OSO₂C₄F₉, C₁₋₆ alkyl-C(=O)-, C₄₋₁₈ aryl-C(=O)-, C₁₋₆ alkyl-SO₂-, perfluoro C₁₋₆ alkyl-SO₂- or C₄₋₁₈ aryl-SO₂-, (where each R¹ independently is C₁₋₆ alkyl, C₄₋₁₈ aryl or C₄₋₁₈ ArC₁₋₆ alkyl); or

20 -CH₂NR²R³, where (a) R² and R³ are, independently, hydrogen, C₁₋₆ alkyl, C₃₋₇ cycloalkyl, C₃₋₇ cycloalkyl C₁₋₆ alkyl, C₂₋₆ alkenyl, hydroxy C₁₋₆ alkyl, C₁₋₆ alkoxy C₁₋₆ COR⁴ where R⁴ is hydrogen, C₁₋₆ alkyl, perhalo C₁₋₆ alkyl, C₃₋₇ cycloalkyl, C₃₋₇ cycloalkyl-C₁₋₆ alkyl, C₂₋₆ alkenyl, hydroxyl-C₁₋₆ alkyl, C₁₋₆-alkoxy, or C₁₋₆ alkoxy-C₁₋₆ alkyl, or (b) R² and R³ taken together with the nitrogen atom to which they are attached form a saturated 3-7

membered heterocyclic ring which may contain a O, S or NR⁵ group, where R⁵ is hydrogen, C₁₋₆ alkyl, perhalo-C₁₋₆ alkyl, aryl, aryl substituted with one or more groups selected from the group consisting of C₁₋₆ alkyl, halogen, nitro, amino, C₁₋₆ alkylamino, perhalo-C₁₋₆ alkyl, hydroxyl-C₁₋₆ alkyl, C₁₋₆ alkoxy, C₁₋₆ alkoxy-C₁₋₆ alkyl and -COR⁶ where R⁶ is hydrogen, C₁₋₆ alkyl perhalo-C₁₋₆ alkyl, C₁₋₆ alkoxy, aryl, and aryl substituted with one or more C₁₋₆ alkyl, perhalo-C₁₋₆ alkyl, hydroxyl-C₁₋₆ alkyl, or C₁₋₆ alkoxy-C₁₋₆ alkyl groups;

R⁷ is H, or C(O)-(CH₂)_m-NR⁸R⁹, where m is an integer of 1-6 or -C(O)CHR¹⁰NR⁸R⁹, where R¹⁰ is the side chain of one of the naturally occurring α-amino acids, R⁸ and R⁹ are, independently, hydrogen, C₁₋₈ alkyl or -C(O)CHR¹¹NR¹²R¹³ where R¹¹ is the side chain of one of the naturally occurring α-amino acids and R¹² and R¹³ are each independently hydrogen or C₁₋₈ alkyl;

W is independently H or F,

R¹³ and R¹⁴ are each H or combine to form a double bond;

and

n is an integer of 1 or 2,

and salts thereof.

2. The camptothecin analog of claim 1, wherein n is 1.

3. The camptothecin analog of claim 1, wherein Y is -CH₂-L.

4. The camptothecin analog of claim 1, wherein L is selected from the group consisting of Cl, Br and I.

5. The camptothecin analog of claim 1, wherein R⁷ is C(O)-(CH₂)_m-NR⁸R⁹, where m is an integer of 1-6 or -C(O)CHR¹⁰NR⁸R⁹, where R¹⁰ is the side chain of one of the naturally occurring α-amino acids, R⁸ and R⁹ are, independently, hydrogen, C₁₋₈ alkyl or -C(O)CHR¹¹NR¹²R¹³, where R¹¹ is the side chain of one of the naturally occurring α-amino acids and R¹² and R¹³ are each independently hydrogen or C₁₋₈ alkyl.

6. The camptothecin analog of claim 1, which is selected from the group consisting of R isomers, S isomers and mixtures thereof.

7. The camptothecin analog of claim 6, wherein the analog is the S isomer.

8. The camptothecin analog of claim 6, wherein the analog is the R isomer.

9. The camptothecin analog of claim 6, wherein the analog is an S rich mixture of S and R isomers.

10. The camptothecin analog of claim 6, wherein the analog is a R rich mixture of S and R isomers.

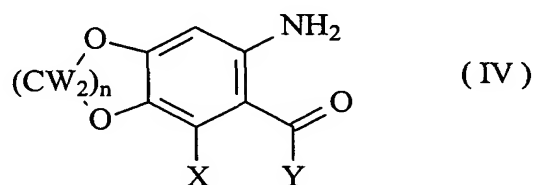
11. The camptothecin analog of claim 6, wherein the analog is a racemic mixture of R and S isomers.

12. A method of treating leukemia or solid tumors comprising administering to a patient in need thereof, the camptothecin analog of claim 1.

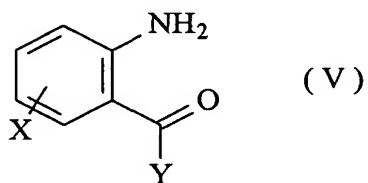
5 13. A pharmaceutical composition comprising the camptothecin analog of claim 1.

14. A method for inhibiting the enzyme topoisomerase I, comprising contacting a DNA-topoisomerase I complex with the camptothecin analog of claim 1.

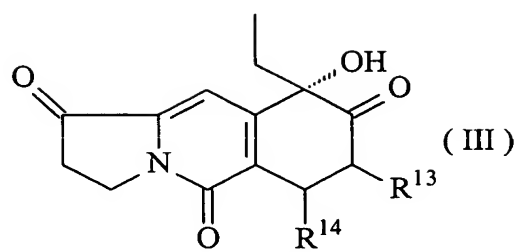
15. A method of preparing the camptothecin analog according to claim comprising: condensing a compound of formula IV or V



10



where X, Y, W and n are as defined in claim 1,
with a tricyclic ketone of formula III



where R^{13} and R^{14} are as defined in claim 1
to form the camptothecin analog of claim 1.